

CLAIMS

1. (currently amended) A wood treating formulation, characterized in that the formulation is comprising a mixture of a first solution containing comprising styrene mixed with an initiator, and a second solution containing comprising furfuryl alcohol mixed with maleic anhydride, wherein the initiator for styrene is chosen from 2,2'-azobis(2-methylbutane-nitrile), 1,1'-azobis(cyclohexane-carbonitrile), tertiary butyl perbenzoate or combinations thereof.
2. (currently amended) The wood treating formulation of claim 1, characterized in that the first solution further consists of initiators and comprises a crosslinker, and the second solution further consists of an initiator.
3. (cancelled)
4. (currently amended) The wood treating formulation of claim 2, characterized in that wherein the crosslinker of the first solution is divinyl benzene.
5. (currently amended) The wood treating formulation of claim 2, characterized in that wherein a mineral oil or wax optionally is present in the first solution as an extender.
6. (cancelled)
7. (currently amended) The wood treating formulation of claim 1 3, characterized in that wherein about 0,3% by weight of 2,2'-azobis(2-methylbutane-nitrile) based on styrene is present in the first solution.
8. (currently amended) The wood treating formulation of claim 1 3, characterized in that wherein about 0,4% by weight of 1,1'-azobis(cyclohexane-carbonitrile) based on styrene is present in the first solution.
9. (currently amended) The wood treating formulation of claim 1 3, characterized in that wherein about 0,5% by weight of tertiary butyl perbenzoate based on styrene is present in the first solution.
10. (currently amended) The wood treating formulation of claim 4, characterized in that wherein about 3,5% by weight of divinyl benzene based on styrene is present in the first solution.
11. (currently amended) The wood treating formulation of claim 5, characterized in that wherein 0 to 30% by weight of mineral oil or wax based on styrene is present in the first solution.
12. (currently amended) The wood treating formulation of claim 1, characterized in that wherein 10 to 30% by weight of furfuryl alcohol, which is based on the styrene of the first solution, is present in the second solution.
13. (currently amended) The wood treating formulation of claim 1 6, characterized in that wherein 5 to 10% by weight of maleic anhydride based on furfuryl alcohol is present in the second solution.

27. (currently amended) The process of claim 14, characterized in that the wood treating solution is impregnated by A method for impregnating a piece of wood, comprising immersing impregnating the wood in the with a formulation according to any one of claims 1-13 and thereafter curing applying a vacuum and pressure cycle to force the formulation into the wood.

28. (currently amended) The process of method according to claim 27 14, characterized in that wherein the wood is impregnated by immersing the wood in the formulation and applying a vacuum and pressure cycle, and further wherein the curing of the treating formulation impregnated in the wood is carried out by heating.

29. (currently amended) The process method of claim 28, characterized in that wherein the curing polymerization is carried out by heating the impregnated wood sufficiently for it to reach 80 C in the center.

30. (currently amended) The process method of claim 28, characterized in that wherein the curing finishing polymerization for products where odour must be kept to a minimum is carried out by heating the impregnated wood sufficiently for it to reach 120 C in the center for at least one hour.

31. (new) A wood polymer composite comprising a piece of wood having cells with cell cavities and cell walls, wherein at a substantially uniform penetration level, the cell cavities are filled by polymerized styrene, and the cell walls are filled with a furfuryl alcohol polymer.

32. (new) A wood polymer composite, comprising a piece of wood impregnated with a formulation according to any one of claims 1-13.